

New mountain inn Glacier Gate, Klein Matterhorn Zermatt

2008



Zermatt Bergbahnen AG wanted to increase the attractiveness of the little Matterhorn. Thus, various structural measures were commissioned - such as the realization of a new building at the southern tunnel exit.

The project

In addition to the new restaurant with store, accommodation for alpinists was to be created and access to the Glacier Palace was to be improved.

The construction

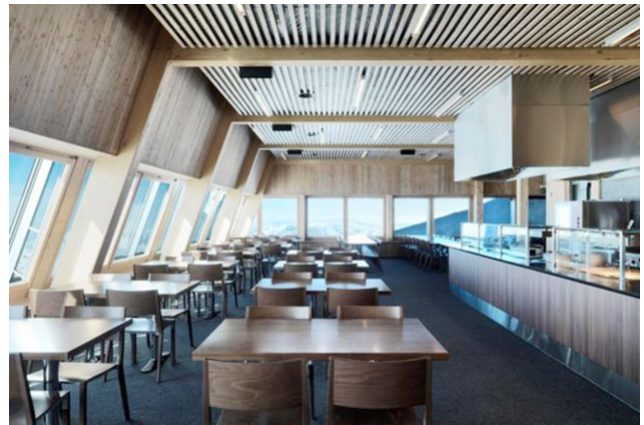
The building is a skeletal structure braced by 3 central trusses and the rear wall slab, with the floor slab and roof as slices.

The challenge

The overall stability was challenging, as the side / south facades could hardly contribute to the bracing of the building due to continuous window bands. At the same time, the effects of wind (up to 100 m/s) and earthquakes (zone IIIb) are very high, which required enormous anchoring and bracing forces. The bracing was solved by means of an E-shaped bracing core consisting of the rear wall of the building and 3 building-high trusses integrated in the interior walls and positioned at right angles to the rear wall. The large tensile and compressive forces of up to 1200 kN from the trusses are transferred into the concrete via welded base plates. This project won the Swiss Solar Prize 2010, Category B - New Construction.



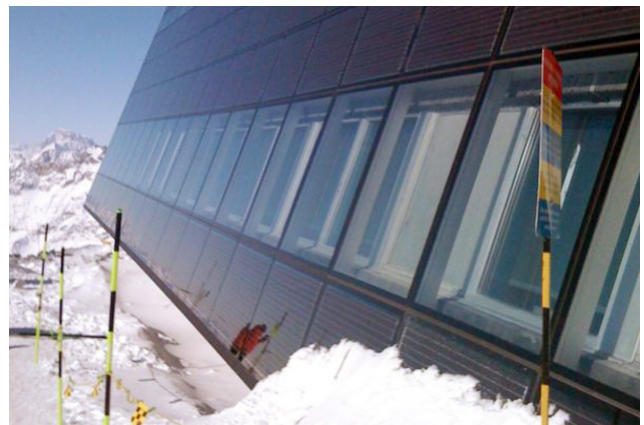
Erecting shell



Restaurant



Store



Facade with photovoltaics

Construction Data

- BSH support frame GL24h / GL28h (without facade): 80 m³
- Duo beam floor slab C24: 7.5 m³
- Steel parts
- slotted plates: 2900 kg (0.3 m³)
- Fitting bolts / fitting screws: 3000 pcs.

Services of Timbatec

- SIA phase 31 preliminary project
- Cost estimate
- SIA Phase 32 Construction project
- Structural analysis and design
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- 3D and 2D construction planning
- Earthquake design
- Execution supervision

Facade planning

Burri, Müller und Partner
3400 Burgdorf

Architect

PEAK Architekten
8005 Zurich

Timber construction Manufacture

Stuber und Cie AG
3354 Schüpfen

Owner

Zermatt Bergbahnen AG
3920 Zermatt